CASE AND COMMENT:
COMMUNICATION OF DIAGNOSTIC STUDIES
by PAUL J. CONNORS, M.D., J.D., CAPT, MC, USNR

CASE

The patient, a 29-year-old woman, was initially evaluated in 1974 as an inpatient at a tertiary federal medical research facility for a lupus syndrome that included characteristic dermatologic manifestations and nephritis. Thereafter she underwent periodic outpatient evaluations and treatments until March 1981, when she was admitted with an acute history of fatigue, arthralgia, and night sweats. She was entered into a plasmapheresis protocol and discharged after a two week hospitalization.

Admission diagnostic studies at the time of this second hospitalization included a standard chest radiograph. A staff radiologist reviewed the study and dictated a report, ultimately transcribed, noting the detection of a 3x5 cm soft tissue density in the right upper lobe. The report further cited diagnostic impressions, including a mass lesion, and recommended clinical correlation with follow-up examinations.

This radiology report was processed routinely. It, however, was never filed with the patient's record. The hospital discharge summary included a statement by one of the attending physicians that the chest x-ray was among a number of standard admission diagnostic studies that were considered within normal limits.

In October 1981, the patient experienced fever and cough. Chest x-rays were repeated by a civilian physician. These disclosed a 4x5 cm lesion, subsequently diagnosed by transbronchial biopsy as adenocarcinoma. In November 1981, she underwent removal of the right upper lobe. At surgery, the mass was estimated at 5x5 cm, and there was no evidence of metastatic disease to the pleura or to hilar or mediastinal lymph nodes. These findings were supported by surgical pathology specimens and clinical evaluations.

In December 1983, metastatic disease arose involving the lung, mediastinum and ribs. Radiation therapy and chemotherapy were instituted.

A malpractice claim was filed with the federal government regarding the care rendered at the time of the March 1981 hospitalization.

JUDICIAL OPINION

Both at trial and on appeal, the government stipulated that the failure of its agents to timely communicate to this patient the results of her March 1981 x-ray and to advise her of the need for further evaluation constituted a fundamental breach of applicable standards of medical practice.[1] The government argued, however, that the plaintiff could not meet the burden of proving a complete legal charge of negligence because, regardless of any admitted breach of standard care, the interim delay in diagnosis and treatment had caused no change in the staging of her malignancy. Therefore, the government contended that the delay could not be appropriately adjudged a causative factor that substantially altered the patient's outcome.

The trial and appellate courts agreed with this argument. The appellate opinion concluded, consistent with expert opinion proffered by the government, that the patient presented in March 1981 suffering an adenocarcinoma of the lung appropriately staged $T_2N_0M_0$ within Stage I according to internationally accepted classifications and that the clinical staging of the disease remained the same when ultimately diagnosed in October-November 1981.

Regardless of the plaintiff's argument, and contrary to judicial opinions from certain isolated state cases, the court refused to consider as legally significant the minimal changes in the size of the patient's primary tumor that

occurred while the diagnosis was delayed. No credible evidence was offered that those changes adversely affected either the staging or outcome of this patient's disease. Therefore, the court determined them inadequate to support a conclusion that a legal injury had occurred.

COMMENTS

The majority of medical malpractice claims are either denied administratively or successfully defended at trial. This case could be dismissed by some clinicians as simply another legally nonmeritorious claim that was favorably resolved. Further, were it to arise today, no provider's name would be forwarded to the National Practitioner Data Bank as a malpractice entry, because no monies were paid to resolve the claim.

An initial lesson here, therefore, is that some successfully contended malpractice disputes at times deserve to be analyzed by providers as critically as cases unsuccessfully resolved. Legally defensible malpractice claims can provide their own contribution toward medical quality improvement and risk management, if carefully reviewed.

The type of error found in this case has been reported before. Schwinger described six cases involving "routine" chest x-rays.[2] In his series, each patient was hospitalized to undergo relatively minor and elective surgery, including hernia repair, cataract extraction, diagnostic D&C, blepharoplasty, and hemorrhoidectomy. In each case, the patient underwent a preoperative chest x-ray, a consultant radiologist diagnosed the presence of a lung mass, the report of the radiologist's interpretation was administratively handled as routine, none of the reports reached the hospital chart until after the patient was discharged, no attending physician became contemporaneously aware of the chest x-ray finding, and the lesion represented lung cancer. In five of these cases, the disease was not diagnosed until after the detection of metastases. Delays ranged from 11 to 18 months. All five patients died, all five cases resulted in malpractice claims, and all were settled for significant amounts.

Schwinger subsequently reported that more than 15 percent of liability cases filed against radiologists in New York State involved problems with communicating results of accurately interpreted diagnostic studies.[3] These included the lung cancer cases noted, breast cancer cases, cases involving other cancers, and those involved with fractures and dislocations.

The American Academy of Ophthalmology in 1987 established a national risk retention liability insurance company for ophthalmologists, the Ophthalmic Mutual Insurance Company (OMIC). In 1992, after five years of underwriting, OMIC had received 371 claims and carried 107 open claims.[4] The company had closed 240 claims without payment and 24 claims with payment. Among the latter, the largest payment, over $400,000, was occasioned by a case in which a chest x-ray prior to cataract surgery revealed a lung lesion diagnosed ultimately as cancer, but the report of the study never reached the attending surgeon for many months.[5]

Risk management tenets with regard to this clinical situation are rather fundamental. They also have application to all types of diagnostic studies, whether standard x-rays, common serum chemistries, or more technologically advanced investigations.

Rote repetition of "routine" diagnostic studies, especially in the setting of preoperative evaluations related to elective surgical procedures, should be discontinued. Clinical studies should be undertaken only upon clinical indications. Legally, the attending provider who orders a diagnostic study warrants its clinical necessity and obliges himself to pursue its result. In some federal facilities, surgical patients are not permitted to be transferred to the holding area for the operating suite until all preoperative studies requested by the surgical staff have been obtained and the report of each study is included within the record. Further, no patient is then permitted subsequent transfer from the holding area into the operating room unless all such reports are both signed and block stamped by the responsible surgeon.

Reviewing transcribed hospitalization discharge summaries also provides clinicians with a window of opportunity to assure that ordered studies have been performed, included in the record, and reviewed.

As noted by Schwinger, some courts in recent years have focused upon the obligation of those who perform diagnostic studies to ensure the completed communication of results to a requesting clinician. For some, this obligation may be diminished when compared to the requesting clinician's responsibility to pursue the results of ordered tests, but the weight of current judicial opinion is quite clear.

Directors of clinical laboratories have developed "panic" values administratively attempting to insure that certain significantly atypical lab results are handled in a non-routine fashion. Such atypical results are directly and urgently communicated to attending physicians.

Communications within the practice of radiology have been addressed with the publication of standards by the Council of the American College of Radiology.[6] Those 1991 guidelines conclude that there are clinical circumstances mandating the direct communication of certain radiologic findings to referring physicians. They outline the type of findings that should trigger direct communications and specify that timing of those communications must be urgent if the immediacy of the clinical situation warrants. The manner of the communication and its documentation can take a number of different, equally effective forms. Those are left to the judgement of practitioners.

Computerized medical recordation also can be designed to address these situations, especially when "demand" transmission of certain diagnostic data is linked with compulsory, acknowledged receipt by clinicians.

CONCLUSION

Claims arising from failures in the communication of diagnostic studies are not common. They appear, however, to recur in certain clinical situations. Further, their recurrence is at a more than incidental and, to all appearances, avoidable rate. Errors of this type run the risk of exposing patients to serious adverse clinical outcomes and providers to the imposition of significant liability. In the name of patient safety, and as a fundamental tenet of clinical risk management, communications between clinicians and their allied and consulting health care colleagues must be completed.

REFERENCES

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